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represents a sequence of 4 to 10 amino acids, X_4 represents a sequence of 3 to 10 amino acids, X_5 represents an amino acid or a sequence of 2 to 4 amino acids, X_6 represents a sequence of 7 to 15 amino acids, and X_7 represents an amino acid or a sequence of 2 to 10 amino acids.

14. The method of Claim 13, wherein X_1 represents a dipeptide, X_2 represents a tripeptide, X_3 represents a heptapeptide, X_4 represents a tetrapeptide, X_5 represents an amino acid, X_6 represents a nonapeptide, and X_7 represents a pentapeptide.

15. The method of Claim 13, wherein

X_1 satisfies the sequence y_1y_2 wherein y_1 and y_2 each represent an amino acid selected from the group consisting of alanine, serine, glycine and threonine;

y_1 represents an amino acid selected from the group consisting of alanine, serine, glycine and threonine, and y_2 represents glutamic acid or aspartic acid;

X_2 satisfies the sequence $y_3y_4y_5$ wherein y_3 represents glutamine or asparagine, and y_4 and y_5 each represent an amino acid selected from the group consisting of alanine, serine, glycine, threonine, valine, leucine, isoleucine and methionine;

X_3 satisfies the sequence $y_6y_7y_8y_9y_{10}y_{11}y_{12}$ wherein y_6 represents an amino acid selected from the group consisting of alanine, serine, glycine and threonine, y_7 , y_{11} and y_{12} each represent proline, y_8 represents an amino acid selected from the group consisting of phenylalanine, tryptophan and tyrosine, y_9 represents aspartic acid or glutamic acid, and y_{10} represents an amino acid selected from the group consisting of valine, leucine, isoleucine and methionine;

X_4 satisfies the sequence $y_{13}y_{14}y_{15}y_{16}$, wherein y_{13} , y_{14} , y_{15} and y_{16} each represent an amino acid selected from the group consisting of alanine, serine, glycine and threonine, or y_{14}

represents an amino acid selected from the group consisting of alanine, serine, glycine and threonine, y_{13} and y_{15} each represent a basic amino acid, and y_{16} represents aspartic acid or glutamic acid;

X_5 represents a basic amino acid;

X_6 satisfies the sequence $y_{17}y_{18}y_{19}y_{20}y_{21}y_{22}y_{23}y_{24}y_{25}$, wherein y_{17} , y_{19} , y_{21} and y_{23} each represent an amino acid selected from the group consisting of valine, leucine, isoleucine and methionine, y_{18} represents proline, y_{20} and y_{24} each represent an amino acid selected from the group consisting of alanine, serine, glycine and threonine, y_{22} represents an amino acid selected from the group consisting of valine, leucine, isoleucine, methionine, phenylalanine, tryptophan and tyrosine, and y_{25} represents an amino acid selected from the group consisting of phenylalanine, tryptophan and tyrosine; or

X_7 satisfies the sequence $y_{26}y_{27}y_{28}y_{29}y_{30}$ wherein y_{26} represents a basic amino acid or an amino acid selected from the group consisting of valine, leucine, isoleucine and methionine, y_{27} represents asparagine or glutamine or a basic amino acid, y_{28} represents proline, and y_{29} and y_{30} each represent an amino acid selected from the group consisting of alanine, serine, glycine and threonine.

16. The method of Claim 13, wherein the polypeptide has at least 60% identity with any one of the isoforms of a PA1b albumin.

17. The method of Claim 13, wherein said polypeptide is chosen from the group consisting of PA1b albumins and leginsulins.

18. The method of Claim 13, wherein said plant is a cereal producing plant.

19. The method of Claim 13, wherein said polypeptide is present in a concentration of 10 $\mu\text{mol/kg}$ to 100 mmol/kg .

20. The method of Claim 19, wherein said polypeptide is present in a concentration of 50 $\mu\text{mol/kg}$ to 10 mmol/kg .

21. A method of protecting a plant from insects comprising transforming said plant with a polynucleotide which encodes a polypeptide having a sequence of the formula (I):



(I)

wherein C represents a cysteine residue, X_1 represents an amino acid or a sequence of 2 to 10 amino acids, X_2 represents an amino acid or a sequence of 2 to 5 amino acids, X_3 represents a sequence of 4 to 10 amino acids, X_4 represents a sequence of 3 to 10 amino acids, X_5 represents an amino acid or a sequence of 2 to 4 amino acids, X_6 represents a sequence of 7 to 15 amino acids, and X_7 represents an amino acid or a sequence of 2 to 10 amino acids.

22. The method of Claim 21, wherein X_1 represents a dipeptide, X_2 represents a tripeptide, X_3 represents a heptapeptide, X_4 represents a tetrapeptide, X_5 represents an amino acid, X_6 represents a nonapeptide, and X_7 represents a pentapeptide.

23. The method of Claim 21, wherein

X_1 satisfies the sequence y_1y_2 wherein y_1 and y_2 each represent an amino acid selected from the group consisting of alanine, serine, glycine and threonine;

y_1 represents an amino acid selected from the group consisting of alanine, serine, glycine and threonine, and y_2 represents glutamic acid or aspartic acid;

X_2 satisfies the sequence $y_3y_4y_5$ wherein y_3 represents glutamine or asparagine, and y_4 and y_5 each represent an amino acid selected from the group consisting of alanine, serine, glycine, threonine, valine, leucine, isoleucine and methionine;

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5 X_3 satisfies the sequence $y_6y_7y_8y_9y_{10}y_{11}y_{12}$ wherein y_6 represents an amino acid selected from the group consisting of alanine, serine, glycine and threonine, y_7 , y_{11} and y_{12} each represent proline, y_8 represents an amino acid selected from the group consisting of phenylalanine, tryptophan and tyrosine, y_9 represents aspartic acid or glutamic acid, and y_{10} represents an amino acid selected from the group consisting of valine, leucine, isoleucine and methionine;

10 X_4 satisfies the sequence $y_{13}y_{14}y_{15}y_{16}$, wherein y_{13} , y_{14} , y_{15} and y_{16} each represent an amino acid selected from the group consisting of alanine, serine, glycine and threonine, or y_{14} represents an amino acid selected from the group consisting of alanine, serine, glycine and threonine, y_{13} and y_{15} each represent a basic amino acid, and y_{16} represents aspartic acid or glutamic acid;

X_5 represents a basic amino acid;

15 X_6 satisfies the sequence $y_{17}y_{18}y_{19}y_{20}y_{21}y_{22}y_{23}y_{24}y_{25}$, wherein y_{17} , y_{19} , y_{21} and y_{23} each represent an amino acid selected from the group consisting of valine, leucine, isoleucine and methionine, y_{18} represents proline, y_{20} and y_{24} each represent an amino acid selected from the group consisting of alanine, serine, glycine and threonine, y_{22} represents an amino acid selected from the group consisting of valine, leucine, isoleucine, methionine, phenylalanine, tryptophan and tyrosine, and y_{25} represents an amino acid selected from the group consisting of phenylalanine, tryptophan and tyrosine; or

20 X_7 satisfies the sequence $y_{26}y_{27}y_{28}y_{29}y_{30}$ wherein y_{26} represents a basic amino acid or an amino acid selected from the group consisting of valine, leucine, isoleucine and methionine, y_{27} represents asparagine or glutamine or a basic amino acid, y_{28} represents

proline, and y_{29} and y_{30} each represent an amino acid selected from the group consisting of alanine, serine, glycine and threonine.

24. The method of Claim 21, wherein the polypeptide has at least 60% identity with any one of the isoforms of a PA1b albumin.

5 25. The method of Claim 21, wherein said polypeptide is chosen from the group consisting of PA1b albumins and leginsulins.

26. The method of Claim 21, wherein said plant is a cereal producing plant.--
